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CHEMIST

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RALPH W. LAMENZO

(See Page 109)

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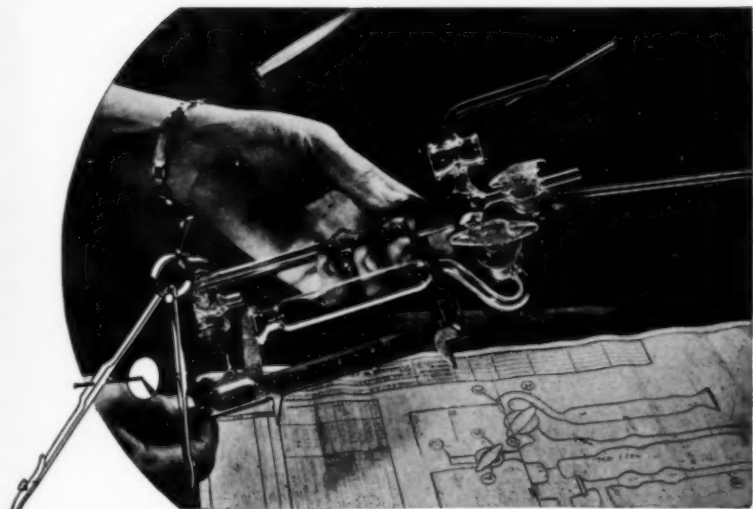
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The Research Organization

Frederick W. Adams

Director of Research, the Clark Thread Company, New York., N. Y.

(A talk given before the New York Chapter, A.I.C., November 20th)

THE physical organization for carrying out research is based on a very simple axiom: Creative research can result from the imagination of a single individual.

Let us examine this statement in detail to see how we can utilize this fact to the greatest advantage.

First, if we look at the single individual for a moment, it is evident that his personality, training, experience and interests have an important bearing on his productivity, both in amount and in scope. Selection of personnel to carry out research is, therefore, of primary importance. No definite formula can be set down for this selection, but it should be pointed out that the productivity of top grade men is generally far ahead that of mediocre men, and that the same sound principles of personnel selection apply in research as in any other business.

Having decided on the individual, definitely one with imagination, our second task is to stimulate his imagination and allow him to use it most effectively. How do we stimulate his imagination? We shall con-

sider passive and active stimulation. By passive stimulation we mean the removal of all disturbing influences, such as noise, unpleasant working conditions, inadequate compensation, unnecessary delays caused by arbitrary procedures, lack of security. We must do more than remove these negative factors. We must provide pleasant working space, stimulating surroundings, adequate physical facilities, adequate assistance, free access to management, congenial colleagues, encouragement by management and recognition of accomplishment.

Having selected the individual and his environment, the next question is, "Will creative research result?" The answer is Yes", but the amount and scope of the research depends also on many other factors, including the size and versatility of the research organization. The type of research organization to obtain the maximum return is our primary concern.

Let us approach the subject from an entirely different angle, which I call the evolutionary approach.

Research consciousness by management is the forerunner to research

activity and eventually to a research organization. Management of a business, which has had no contact with research, may first realize a need for chemical analysis of raw materials or products. For this work it turns to a competent analytical laboratory for assistance. Technical application of the results being out of management's ken, it next turns to a qualified consultant who can advise it on technical subjects. It is quite likely that a critical analysis of the problem will lead to a need for developing more detailed technical information bearing on the subject. Here we enter the field of research, and a research project is established to obtain this information.

The research project may be performed by the consultant's staff in a commercial research organization or in a university. The type of laboratory selected will depend on many factors, including the magnitude of the project and the special field involved. It may be completed rapidly or require extended time and effort. If positive results ensue, management becomes convinced of the place of research in its company and interest is stimulated to take further advantage of this new tool. In all of this discussion, it is assumed that management is taking a long viewpoint and hiring the best available brains to accomplish its objective.

Eventually a research project will be conceived which requires the full

time of one experienced research worker. Close contact with management will permit ready translation of his results into profits. At this point, we have developed to the basic element of the research organization, the research worker. He may or may not be assisted by one or two research or technical assistants. The effective use of assistance to make his research accomplishments most productive is as important as the use of up-to-date equipment and methods.

Expansion of a research program to cover several projects or a project in a variety of fields will require an expansion of personnel. Since this personnel will be selected from a variety of training and experience, correlation of their activities will require a suitable director. Contacts with manufacturing, sales, merchandising, and top management will be maintained by the research director.

The organization chart of a typical small research staff following the principles outlined above will comprise:

The Director of Research and a technical assistant.

Project leaders and assistants.

Laboratory manager and service personnel.

The functions of these three major groups deserve a more detailed consideration, particularly as regards their inter-relationships.

The project leaders and their assistants are the heart and brains of the organization and on their pro-

THE RESEARCH ORGANIZATION

ductivity depends the successful outcome of the research program. The solution of problems presented to them and the creation of new ideas is their primary function. Their success will depend in large measure on their ability and the encouragement and physical facilities given them by research management.

Research management, including the director of research and his staff, have as their most important function the provision of adequate facilities to enable the project leaders to perform creative research of economic value. These facilities include: contacts with top management, production, sales and merchandising to guide research efforts into lucrative channels; encouragement of creative effort; co-ordination of work among group leaders; and provision of adequate physical facilities. In a larger organization the director may require a staff of assistant directors and group leaders to supplement his efforts in accomplishing these functions.

The development of a technical service personnel of specialists in various sciences and fields may be accomplished in a small research organization by selecting project leaders of varied training. In a larger organization, consultants on the management staff who are specialists in physics, mathematics, biology, electrochemistry, engineering, patent law and other pertinent fields may supply the necessary technical assistance to

the project leaders on their various problems.

The laboratory manager and his service personnel will supply the services and equipment of a less technical nature including: stenographic assistance in the preparation of reports, library facilities, machine shop, instrument making, glass blowing, drafting, chemical supplies and such other services as will relieve the project leader of non-research activities.

An organization built along the lines discussed, which recognizes the creative ability of the individual, has an outstanding opportunity for productive success.

New Science Foundation Bill

HR 5532, introduced by Representative John Heselton (R., Mass.), attempts to compromise President Truman's wishes with the type of bill vetoed by him last year. In the new bill, which has been referred to the House Interstate Foreign Commerce Committee, the membership of the foundation would be appointed by the President from nominations made by scientific and educational institutions, including land grant colleges. The chairman would be appointed by the membership to serve for a two-year period.

Zahnd Promoted

Dr. Hugo Zahnd, F.A.I.C., has been promoted to the rank of associate professor of chemistry at Brooklyn College, Brooklyn 10, N. Y.

Silver Anniversary Program

The twenty-fifth Annual Meeting of The American Institute of Chemists will be held at the Waldorf-Astoria Hotel, New York, N. Y., on Friday, May 7, 1948, with the following program:

Program

11:00 A.M. — Registration (Fee \$1.00) Le Perroquet Suite.

12:00 Noon—Meeting and luncheon of the National Council. Le Perroquet Suite.

2:00 P.M. — Annual Meeting. Le Perroquet Suite.

President's Address,

Dr. Foster D. Snell.

(Panel of speakers
to be announced later)

3:40 P.M. — Annual Business Meeting.

Committee Reports.

Election of Officers and Councilors.

New Business.

5:00 P.M.—Adjournment.

7:30 P.M.—Medal Presentation Banquet. (Tickets, including gratuities, \$6.00 in advance.)

Wedgwood Room.

Joint Meeting with New York Section, American Chemical Society.

Toastmaster,

Dr. Foster D. Snell.

Annual Meeting, New York Section, American Chemical Society.

Dr. Hans T. Clarke, Chairman.

Medal Presentation Meeting, The American Institute of Chemists, "The Career of the Medalist", Francis J. Curtis, Vice President, Monsanto Chemical Company.

Medal Presentation,

Dr. Foster D. Snell.

Acceptance Address, Dr. Charles Allen Thomas, Executive Vice President and Technical Director, Monsanto Chemical Company.

Every member of the A.I.C. is cordially invited to attend both the afternoon and dinner meetings. Those who are charter members and those who joined the A.I.C. in 1923, our founding year, will especially want to come to this Silver Anniversary celebration. Guests may be invited. Dress is informal. The silver anniversary announcements and reservation slips will be sent to A.I.C. members about April 1st. These should be filled out and returned promptly. If hotel reservations are needed, they may be requested through the A.I.C.

Arrangements Committee

The Committee on Arrangements for the Silver Anniversary Meeting consists of Dr. Joseph Mattiello, Chairman; L. H. Flett, and C. P. Neidig. A Special Silver Anniversary Committee consists of the chairmen of each of the Chapters of the Institute.

What Does the Chemist Expect of His Job?

Part I

Dr. A. B. Cramer, F.A.I.C.

F. & F. Laboratories, Chicago, Ill.

(Presented as part of a panel discussion at the December 12th meeting of the Chicago Chapter, A.I.C.)

A CHEMIST in order to achieve the fullest satisfaction in his work must receive from it both a sense of dignity and usefulness. Any discussion of the various aspects of the chemist's professional relationships must take these two factors into account, and evaluations should be made always in the light of these prime requisites.

Such considerations attain their initial reality in what is frequently the chemist's first professional experience, employment application forms. Here he often encounters questions which not only explore his experience and training, but which prod and poke into every nook and cranny of his private life. Many of these questionnaires are not only searching, but are downright impudent and humiliating to the man who feels that he wants the job. The query is raised, to what extent are such questionnaires consonant with a position and sense of dignity?

A similar query may be made with regard to chemists' contracts. The Voorhees Committee report on contracts (See *The Chemist*, May

1946), supplemented by a personal examination of many such contracts, leaves one with the impression that the perpetrators were attempting to get as close to papers of indenture as the law would permit.

The problem of just and adequate compensation is never separable from any such discussion. Certainly, adequate compensation would appear to be a natural concomitant of professional dignity. Within the past few years a gratifying increase in the lower bracket salaries, even in consideration of higher living costs, has been noticeable. Unfortunately, the improvement has not extended generally to men with positions formerly considered in the middle brackets, and many of these men in positions of responsibility find themselves with salaries little or no better than those of many of their subordinates. The result has been a lowering of morale and enormous turnover in these positions, as evidenced by weekly personnel notes in *Chemical and Engineering News*.

In the actual practice of chemistry in the laboratory, conditions are gen-

erally much more satisfactory. One of the most frequent complaints is that an excess of semi-clerical work hampers and limits the chemist. This is not, however, a major objection and only looms large because of the highly desirable circumstances that otherwise predominate. Well-informed opinion is usually respected and utilized, and the relationship of colleague to colleague, rather than superior to

subordinate, generally governs technical discussion. A full exploitation and development of talent and training, and hence usefulness, is not only permitted but encouraged. It is probable that it is here, in the internal laboratory relationships, that the ideals of usefulness and dignity receive their greatest degree of fulfillment.

What Does the Chemist Expect of His Job?

Part II

Dr. R. K. Summerbell

Professor, Northwestern University

(Presented as part of a panel discussion at the December 12th meeting of the Chicago Chapter, A.I.C.)

IT IS of paramount importance to our national welfare that competent men are drawn to the scientific professions and that they are used in their highest capacity. The present world situation, in which the United States enjoys a monopoly of scientific research, is almost certainly temporary and it will be followed by one of intense competition. Our future as a nation may depend on the use we make of the advantage we now hold, particularly with respect to the recruiting, training, and treatment of the few thousand men whose scientific output will determine the outcome of the approaching engagement

when we have returned to a competitive situation.

Whether or not the envisaged struggle on a global scale ever develops, its counterpart within our own economy is now here. The corporation that fails to recruit and retain a competent research staff is headed for certain oblivion. The educational institution that fails to produce graduates who are competent to assume their responsibilities in the imminent contest faces an equally bleak future. From friendly discussions such as the present may come needed modifications of practice, in schools and in industry.

WHAT DOES THE CHEMIST EXPECT OF HIS JOB?

Most chemists select their profession for rather idealistic reasons. As high school graduates, they have a burning, if rather naive, desire to make discoveries of consequence, and but few seek to enter the profession because of anticipated high incomes. Even these few are largely eliminated early in their academic careers by the rigorous curriculum and by personal observations of the vintage of cars habitually driven by even the outstanding men in the field. It is a simple statement of fact that most chemists are chemists because they want to do chemical work, and any discussion as to what they are looking for in the nature of jobs must take this fact into consideration. On the other hand, industrial concerns must be primarily interested in the dollar value of the labors of the prospective employee and are rather critical of educational institutions for not indoctrinating students adequately with the profit motive.

One of my friends charged with the responsibility of recruiting scientists began his interviews with the statement, "The ——— company is not a scientific institution." He failed so completely to attract any outstanding men that he has modified his approach. He now says, "The pure research carried out by my company compares favorably with that of any university in the country." Both statements were true, but the latter

was much more attractive to young graduates.

As a university professor, it has been my privilege to talk with many men who are considering a change of jobs and I believe that a list of the reasons they have given for seeking a new connection may have a bearing on our problem. The following tabulation is in the order of approximate frequency.

- (1) Nature of problem and approach to that problem.

Some companies expect Ph.D. graduates to apply exclusively Edisonian methods to routine plant problems.

- (2) Lack of freedom of publication.

Some companies have an iron curtain that makes the one in central Europe seem like plate glass.

This attitude is understandable. A friend of mine worked for a company that formerly had a very liberal publication policy. One bit of information that it published in a standard journal inspired a competitor to take out a patent, and as a result, the first company was forced to pay \$60,000 a year in royalties for rights to use a discovery that was apparently made in its own laboratory. That \$60,000 looks pretty large on the balance sheet, and so that company has published nothing of consequence since. The directors of that company doubtless feel that they have acted wisely, for their books do not show already



the profits lost by virtue of personnel shifts, of which there have been several, nor the cash that might have accrued if they could still interest the better type of research worker who now goes elsewhere.

- (3) Lack of freedom as to political or economic views.

Some research directors believe that their prerogatives include that of dictating the activities of their men with respect to national elections. More often they have decided views on such questions as socialized medicine or unionization, and they insist that their employees follow the company line. Such attitudes are never explained during recruiting expeditions.

- (4) Lack of future prospects in a particular company because of race or because of a structure in the higher brackets that precludes advancement.

Some companies are family properties, and executive positions are open only to members of that family regardless of merit. Others are fairly liberal in hiring persons of variable antecedents, but close all avenues of advancement to those of a particular race, color, or religion.

- (5) Lack of a long-term company policy with respect to research.

Some companies assemble large research staffs during good times and fire them as soon as clouds appear on the economic horizon. Stories of such purges are passed on for generations

and greatly handicap the offending company long after the policy has been changed.

Most of the offenses mentioned bring about automatic corrections. The company that handicaps itself by such practices loses the best men to its competitors, and it is only the most fortunately situated concern that can afford that sort of luxury. In any case, companies which lose outstanding men or fail in their recruiting programs can never attain the position that they might if they followed more enlightened practice.

There is much evidence that the factors mentioned are really playing an important part in the present highly competitive situation. The men who are changing jobs now are the outstanding persons, and they are moving to the firms with long-established reputations for favorable treatment. Salaries for recent Ph.D.'s are inversely proportional to the scientific reputation of the companies involved. Better men are willing to accept less money from companies with a reputation of a liberal publication policy. Certain large corporations are granting increased responsibility, recognition, and opportunity to do fundamental work to their outstanding research men.

If conditions continue to improve in industry, the plight of the universities will become increasingly serious. Four of the last six men to join my own staff had had industrial

WHAT DOES THE CHEMIST EXPECT OF HIS JOB?

experience, and two came directly from much higher paying jobs with major companies. They were not seeking an opportunity to grade Freshman quizzes, but they were willing to sacrifice thirty to fifty per cent of the pay they would receive in order to gain freedom to do research of their choice and to publish it. When industry adds to the incentive of high wages the equally important incentive of freedom of research and publication, the problem of assembling competent teaching staffs will become very much more serious.

Course In Fat and Oil Technology

The American Oil Chemists Society will give a short course in fat and oil technology, August 16-21st, at Urbana, Illinois, in cooperation with the University of Illinois. J. P. Harris, manager of the Chicago office of Industrial Chemical Sales Division of West Virginia Pulp and Paper Company, is chairman of the Education Committee to handle arrangements.

Dr. George L. Royer, F.A.I.C., assistant director of physical chemical research, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J., presented a paper on "The Scientific Study of Rayon Dyeing", at the February 21st meeting of the Canadian Association of Textile Colourists, held at McGill University.

Report on Education

President Truman's Commission on Higher Education strongly recommended, in its fourth report, better training and selection of the faculty of colleges and universities; the expansion of in-service education programs, and increased salaries. According to the report, the average salary for professors, in 1946-47, was \$3,867 for a nine-month term. "The professor taught more students, worked longer hours, shouldered graver responsibilities and received substantially less real income than he did in 1940." The report also stated, "Salaries should be increased often enough to hold excellent teachers and research specialists. Most colleges and universities face the prospect of being unable to meet payrolls unless they can increase their current income or unless they deplete their capital reserve. Raising the salaries . . . depends upon sharply increased public and private support of higher education."

Employee Benefits At Monsanto

Monsanto Chemical Company, in its 1947 *Annual Report*, shows that its hourly wages are above the chemical industry's average of \$1.25, and that employees also receive other benefits, such as vacations with pay, pensions, group insurance, free medical examinations, shift bonuses, holiday pay, and improved on-the-job facilities.

Hawes with Navy Radiation Laboratory

William W. Hawes, F.A.I.C., was released to inactive duty by the Navy last fall. He is now with the Navy Radiation Laboratory, a new research laboratory concerned with the defensive aspects of nuclear warfare, at San Francisco Naval Shipyard, San Francisco 24, California.

The Profession Is A Fraternity

Karl M. Herstein, F.A.I.C., addressed Mu Chi Sigma, the honorary Student Chemical Society at New York University, Washington Square College, on January 9th. His subject was "The Profession of Chemistry." He emphasized that the profession constitutes a fraternity which any qualified chemistry graduate can join at the cost only of participation in the activities of the various chemical societies, particularly THE AMERICAN INSTITUTE OF CHEMISTS and the American Chemical Society. This point of view was new to the audience and their interest was indicated by an enthusiastic question period which lasted longer than the lecture.

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Firth Joins Cuprinol Division

Frank E. Firth, F.A.I.C., formerly technologist with the U. S. Fish and Wild Life Service, and until recently associated with the Linen Thread Company as manager of the Netting Research Department, has joined the Cuprinol Division of Darworth, Inc., Simsbury, Conn., to develop the use of Cuprinol products in the fishing industry.

Mr. Firth began work for the Bureau of Fisheries in 1928, and was in the government service for seventeen years. He has published a number of papers on biological and technological subjects, the latter dealing with the application of preservatives for fish nets, and fibers utilized in the manufacture of fishing cordage and nets. He has served as Honorary Curator of Fishes at the New England Museum of Natural History, Boston, since 1938. During the war he worked with the War Production Board, Cordage and Netting Branches, on allocations to the fisheries of the United States, and also did research on the development of substitute fibers.

Cosmetic Chemists to Meet

Marcel J. Suter, chairman of the Entertainment Committee of the Society of Cosmetic Chemists, announces that the next meeting of the Society will be at the Biltmore Hotel, New York, N. Y., on May 19th.

The Question

Looking back over twenty-five years, what advice would you give to young chemists who are starting out today?

(Asked of members who joined the A.I.C. in 1923, our founding year.)

The Answers

By John W. Crawford, President, Treasurer, Crawford Industries, Inc., and Judge of Tilton Municipal Court, Tilton, New Hampshire:

"Work hard, for few people know how to work today. Adherence to this will prove of more value in the long pull."

By Charles A. Fort, Chemist, U. S. Department of Agriculture, Bureau of Agricultural and Industrial Chemistry, 2100 Robert E. Lee Boulevard, New Orleans, La.:

"Continue education until doctor's degree is obtained before taking work position."

By Dr. John Gaub, U. S. Storekeeper-Gauger, U. S. Treasury, Alcohol Tax Unit, Philadelphia, 6, Pa.:

"In looking over the past years, I find that there is a certain amount of psychology that enters into our position as chemist. Our position is



A. C. Lansing

determined by our state of mind, for we are as big as we feel. Our state of mind must not include envy of the other fellow who succeeds, perhaps due to his powers, or to his psychology of life.

"We are what we wish to be, because we are plastic like clay. Our fate we cannot decide, yet we control our actions for they are our own.

"Life is big business and the chemist fulfills a big work in that business, with his studies of life's laws and their many ramifications. In our field of endeavor we can become like trash if we do not hold membership in some technical organization, especially our beloved Institute, which for years has tried to secure licensure. Here we find much work for all."

By A. C. Lansing, Vice President and Director, Foundry Development Engineers, Inc., Detroit, Michigan:

"Don't let anyone kid you—especially don't kid yourself; be sure you're right, then go ahead; keep your eye on the ball, hit it hard and safe, or bunt or pass it up. Play your position with your head and your heart. Don't despise platitudes. Think them over and understand them. They are not platitudes if they do not apply to you as well as to the other fellow."



James J. Lichtin

By James J. Lichtin, Chemist (in charge of analytical and control laboratory), Verona Chemical Company, 26 Verona Avenue, Newark, N. J.:

"Be well prepared to meet stiff competition. Let not material returns be the only goal of your success. Some of your reward may come through service and spiritual satisfaction."



William H. Rinkenbach

By William H. Rinkenbach, Chief, Research Section, Picatinny Arsenal, Department of the Army, Dover, N. J.:

"(1) To acquire all possible formal qualifications such as degrees and The American Institute of Chemists' fellowship; (2) To obtain a true education in addition to the training indicated by (1); and (3) to endeavor to establish a standing by publications."

By Wilmer C. Powick, Senior Biochemist, U. S. Bureau of Animal Industry, Agriculture Research Center, Beltsville, Maryland:

"Respect your profession, but don't worship it as the whole of life."

THE ANSWERS



Glenn H. Wagner

By Glenn H. Wagner, Assistant Director of Research, Aluminum Company of America, P. O. Box 497, East St. Louis, Illinois:

"To those in industry, pay particular attention to the business side of their work; also personnel problems and cooperation with other divisions of their company."

By Dr. Martin Meyer, Professor and Chairman of Department of Chemistry, Brooklyn College, Brooklyn, New York:

"Know yourself. If you are interested in material returns, cultivate a knowledge of chemistry and business considerably wider than the usually purely research point of view."



R. A. Webber

By Robert A. Webber, Assistant Director of Research, Brown Company, Berlin, New Hampshire.

"Broaden scientific experience by the study of sciences closely related to chemistry. Scientists as a group should assume a more important place in the affairs of the community, the State, and the Nation; to that end make all possible business, cultural, and wholesome social contacts."



Professor Alexander Silverman, F.A.I.C., head of the Department of Chemistry, University of Pittsburgh, will address the Western New York Section of the American Chemical Society, in Buffalo, March 16th, on "The Last Decade in American Glass Manufacture."

We Present the A. I. C. Chapters

The objectives of THE AMERICAN INSTITUTE OF CHEMISTS are carried out locally through its chapters. These chapters are being presented to our membership, from time to time, in THE CHEMIST.

The Baltimore Chapter

Ralph W. Lamenzo, Chairman

THE initial move to organize a Baltimore Chapter of The American Institute of Chemists was made in 1932. Dr. S. M. Weisberg, Dr. Norris W. Matthews, Miss Elsa Orent, Dr. A. H. Warth, and several others gathered together for this purpose. The group was short of ten in number, however, and the project was postponed for consideration at a later date.

In 1933, the Baltimore A.I.C. members affiliated with the Chemical Section of the American International Academy. This affiliation was approved by Howard S. Neiman, Secretary, A.I.C., on December 8th of that year. As a result of this affiliation, it was possible to secure an attendance of forty or fifty chemists at the meetings. The Baltimore A.I.C. members were also taking an active interest in the Washington, D. C., Chapter. Dr. Matthews had arranged for yearly plant visitation meetings in Baltimore, which were well attended by both the Washing-

ton, D. C. Chapter and the members-at-large in Baltimore. During 1940-1941, Dr. Warth served as president of the Washington, D. C. Chapter.

Following a request by some of the A.I.C. Baltimore members, a group gathered at Loyola College during June, 1943, to discuss the prospect of a Baltimore Chapter. Among those present were Dr. Joseph J. Balassa, Marc Darrin, Edward M. Hanzely, Ralph W. Lamenzo, and Dr. Warth. Communications in favor of the formation of a Baltimore Chapter were received from seven other members. This meeting was well attended, and eighty per cent of the total membership of thirty in Baltimore approved of the formation of a local chapter.

Dr. Gustav Egloff, then president of the A.I.C., formally opened the Baltimore Chapter on the evening of October 28, 1943, delivering an address on "Petroleum in the War", followed by an important message concerning the affairs of the Institute,

THE BALTIMORE CHAPTER

and the proposed regimentation of chemists by the Kilgore Bill (S-702). The lecture hall at Loyola was well filled. Dr. Warth, as Chapter chairman, proposed a program comprising ten lectures and four business meetings each year. At a later date, the Baltimore Chapter received its charter.

The Baltimore Chapter still retains Loyola College for its monthly meetings, in collaboration with Rev. E. S. Hauber, S.J., head of the Chemistry Department of Loyola College. Meetings have also been held at the University of Maryland, as arranged for by Dr. W. H. Hartung, of that university.

This Chapter proposes to carry out the objectives set forth by the national A.I.C., and will do all in its power to advance the chemist in his profession and to aid him to understand better his fellow chemists, his problems, and his skills.

Our program is specifically planned to bring out the high lights of actual local plant practice in which chemists and chemistry play such an important part. Trips through various plants have been scheduled and are followed by talks by a member of the plant's technical staff. In addition to the visits and lectures in the practical field we have arranged lectures on research and specialized chemical work.

An innovation is being tried this year, in which we have assigned a

meeting which will be devoted to the "ladies". The speaker's subject for the evening will be a topic that will be especially suited to the fair sex.

The Baltimore Chapter's Chairman

Ralph W. Lamenzo, a graduate of Pratt Institute, is production manager of The H. B. Davis Company of Baltimore. His experience has been entirely in the paint and varnish field.

After graduation, he started with the Hilo Varnish Corporation as junior chemist in their laboratory.

Some years later, he had the unique experience of being the first paint technician from the States to be engaged by the first paint manufacturing company in Cuba. This was the Bredell Paint Products Company, and it was his good fortune to see this plant quadrupled in size during his five year tenure, finally to be purchased by one of the largest paint organizations in the United States.

While in Havana, Lamenzo seemed to do fairly well outside of working hours. He was adjutant and commander of the Havana Legion Post, to say nothing of being editor of its monthly publication, AJIACO (ah-he-ah-co). Strange as it may seem, he knew not a word of Spanish at first, but after mastering the cuss words, the rest came easy, and in a

short time he spoke the language fluently.

Shortly after the sale of the Breddell plant, Ralph returned to the States, locating eventually with the A. C. Horn Company as superintendent, a post which he relinquished in order to join the growing H. B. Davis Company as production manager.

He is a charter member of the Baltimore Chapter, previously having been a Fellow with the New York Chapter. He has been active in technical work with Paint Products Clubs and he is past president of the Baltimore Paint and Varnish Production Club.

His activities extend beyond the chemical field. He is president of his local Parent-Teachers Association, vice president of the Industrial Club of Baltimore, past commander of the American Legion, active in Boy Scout work, and last but not least, a successful dahlia-raising hobbyist.

Egloff On Scientific Advisory Board

Dr. Gustav Egloff, F.A.I.C., has been appointed to serve on the Scientific Advisory Board of the Quartermaster Food and Container Institute for the Armed Forces, Department of the Army, Chicago. The purpose of the board is "to review through study groups proposed research projects and programs and to ascertain fundamental critical food research areas requiring investigation."

Mattiello Elected Fellow

Dr. Joseph Mattiello, vice president and technical director of the Hilo Varnish Corporation, 42 Stewart Avenue, Brooklyn, New York, was unanimously elected a Fellow of the New York Academy of Sciences. Election to Fellowship is a distinguished honor, conferred on a limited number of active members, who, in the estimation of the Council, have done outstanding work toward the advancement of science.

Instrument Society Conference

The 1948 National Conference and Exhibit of the Instrument Society of America will be held at Convention Hall, Philadelphia, Pa., September 13th to 17th. Hank Cabot, director of public relations for Brown Instrument Division of Minneapolis-Honeywell Regulator Company, has been appointed chairman of the press relations committee.

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185 N. Wabash Ave., Chicago 1, Ill.

The Oasis

Daily to our ears comes the depressive news from the war-torn, hungry, and strife-filled world. The confusion, struggle for power, and wide-spread suffering leave us appalled. From every side, we are urged to "do this" or to "do that" to solve the world's problems, but every would-be physician prescribes a different remedy.

When we analyze the present world-situation, these things emerge clearly: The United States is a country of abundance. Its standard of living is surpassed by that of no other nation. Its productive power is enormous. It stands as the largest oasis in a desert of deprivation.

When we give thanks for our advantages we are not wholly selfish. Other countries who hunger and suffer for lack of necessities turn to the United States for help. Our prosperity helps to raise the status of the rest of the world, just as depression in a powerful nation serves to pull down the standards of all. We are a generous people and our aid is manifested in many ways. The world is better-off and nearer to ultimate salvation for the very strength of the United States.

Does the world at large realize this? No doubt it does. But as mature persons we must expect that there are those that passively hate us

for our advantages; there are those that embroil us in controversies so that they can gain power over others; and there are those that maliciously seek to destroy that which they envy.

These men of ill-will emphasize and foment internal differences (no nation nor individual is perfect) in the hope that, confused by the shouting, we will believe that our national fruits are sour and cease to cultivate them. They spread the nets of espionage to cover not only our government agencies but all industry, including the chemical industry, for they realize how much our strength and productivity depends upon this chemical industry. In certain cases, these agents of foreign governments have even dominated the actions of groups of loyal citizens. They have organized and financed groups who continually try to place foreign agents in strategic positions in industry, including the chemical industry, that our research may be disclosed and our nation be reduced in productivity. Their code permits these men no loyalty to the United States nor to employers. On the contrary, they must use every means to undermine the loyalty of others in addition to collecting secret data.

Such treason is not news to persons informed about history. Disloyalty is not news to the world. It

is prudent, however, for the chemical (and all) industry to protect itself and the nation against betrayal. Nor should it go "witch-hunting" to do this. There are even cases where foreign agents who do not have access to vital information might well waste their time (so far as espionage is concerned) in whatever positions they hold. The chemical industry needs only to be sure that strategic positions are not made available to such persons and that it recognizes the value to itself, to the United States, and to the world at large, of our loyal employees who keep this nation productive.

Atomic Energy Commission Fellowships

A fellowship fund of \$1,000,000, has been set up by the U. S. Atomic Energy Commission to finance the training of physicians and biologists in the field of atomic energy as applied to biology and medicine. The program will be administered by the National Research Council of the National Academy of Sciences.

Carlson with Medical College of Alabama

Dr. Warner W. Carlson, F.A.I.C., formerly with the Department of Research in Pure Chemistry, Mellon Institute, Pittsburgh, has joined the Biochemistry Staff of the Medical College of Alabama, Birmingham, with the rank of associate professor.

Lazier With Charles Pfizer & Co.

Dr. W. A. Lazier, F.A.I.C., has been appointed director of chemical research for Charles Pfizer and Company, Inc., effective April 1st. For the past several years, Dr. Lazier has been director of the Southern Research Institute, Birmingham, Alabama.

Carleton at Boston College

Dr. R. K. Carleton, formerly on the staff of Rhode Island State College, is now associate professor of chemistry at Boston College, Chestnut Hill, Massachusetts.

Cotton Now with Holly Sugar

Robert H. Cotton, F.A.I.C., formerly supervisory chemist of the citrus Experiment Station, University of Florida, is now director of research for the Holly Sugar Corporation, Colorado Springs, Colorado.



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Communications

The New York Municipal Chemists

To the Editor:

I note from Council proceedings in the January issue of *The Chemist* that the economic situation of the New York Municipal chemists has not improved, in spite of A.I.C. efforts on their behalf during the last two years. It should be apparent by now that the Institute cannot effectively apply such direct pressure. In fact, I believe it does more harm than good. A reputation for such coercion, suggestive of unionism, is the very thing the Institute must avoid.

May I take this opportunity to again recommend a partial program for the Institute which I have long advocated. Rather than expending our efforts against sub-standard employers, let us actively advertise and foster those who provide employment standards such as outlined by the report of the Northey Committee.

The Municipal Chemists of New York will fall into two categories: the less competent and those who are victims of circumstance and/or lack of initiative. For this latter group there is surely opportunity in the Metropolitan area or elsewhere for better employment through the active aid of the Institute. I realize that many will hesitate to transfer because of seniority rights, etc., but why

throw good years after bad? Any alleviation of their condition in their present employment which the Institute might accomplish would be only temporary. In a short time the spiral of inflation and wage levels would again overtake them.

Let us leave the sub-standard employer strictly alone and he will soon be stewing in his own sub-standard conditions.

—F. Sievenpiper, F.A.I.C.

Editorial Note:

We asked Dr. Foster D. Snell for the latest news about the situation of the Municipal Chemists and he reported as follows:

On February 17th, I attended an informal hearing at New York City Hall on behalf of the Institute. This was presided over by Mr. Shea on behalf of the Director of the Budget. The principal presentation was made by Mr. Janer of the City Chemists' Committee whose outline was well organized. The foundation of the presentation was their printed brief, which we have.

I concluded the discussion on behalf of the chemists by an affirmation that the statements were correct as to the present levels of salaries in industry, that the city could not possibly hire qualified men at their scheduled salaries for the positions. That is

further confirmed by the present fact that they have to hire replacements on a temporary schedule at over-scale rates. Such men do not have tenure. I also stressed that in this, the men are of a high professional type not to be confused with large groups, such as social workers who have a self-conferred professional status but are in the main not of the level of education, experience, or accomplishment represented by the profession of chemistry.

With all of this Mr. Shea agreed and he freely conceded that something would be done for the profession of chemistry in budgeting. He was very frank in expression of his views. What the change will be should be available in a couple of weeks. It was painfully evident that the profession of chemistry is not so well recognized by the city as that of engineering and not so well paid because of the indefinite definition of chemist and the legal, which is to say state, definition of engineer.

In general, I believe that my being present served the useful purpose of confirming the representations of the group as to the status of chemists in industry as contrasted with those at present in the employ of the city of New York. In other words, on behalf of the Institute, I said, "We agree".

A Pledge to the Profession

To the Secretary:

Today, I have received my fine membership certificate of which I am truly proud. This is indeed an honor for which I thank the Institute and for which I pledge to my professional society my unflinching best in maintaining and in elevating our integrity as a profession by unceasing thirst after truth in knowledge, by continual practice of applied principles to the best of my ability, and above all by an honor worthy of membership in the Institute.

—John R. Albert, M.A.I.C.

Reprint Permission Requested

To the Editor:

We wish to request your permission to reprint in the *American Professional Pharmacist*, the very excellent article entitled, "Better Health Through Science" by Dr. Ernest H. Volwiler, which appeared in *THE CHEMIST* 24:451 (November 1947).

The *American Professional Pharmacist* is the only national professional pharmaceutical publication for the 10,000 leading prescription pharmacies and for the pharmacies in the 3,000 larger hospitals of the United States. It aims to further the profession of pharmacy and devotes itself only to subjects of interest to prescriptionists.

—Madeline Oxford Holland D.Sc.
Managing Editor.

Necrology

Fred C. Koch

Dr. Fred Conrad Koch, director of biochemical research, Armour and Company, Chicago, Illinois, died January 26, 1948, at the age of 71.

He was born in Chicago. He received the B.S. and M.S. degrees from the University of Illinois, and the Ph.D. degree from the University of Chicago.

From 1912 to 1941 he was on the staff of the University of Chicago, advancing from assistant professor of biochemistry to chairman of the Department of Biochemistry. In 1941 he became emeritus professor of that University, and director of biochemical research for Armour and Company.

He was internationally known as an endocrinologist and biochemist, and his publications in these fields totaled more than one-hundred papers of which over sixty were on the sex hormones. He was a pioneer, with L. C. McGee and T. F. Gallagher, in the field of male sex hormones.

In collaboration with his wife, Elizabeth Koch, also a biochemist, he published a number of papers on Vitamin D. He also contributed new analytical methods to biochemistry, devised assay methods for hormones, and designed apparatus for biochemical research.

He was a delegate, in 1930, to the

International Sex Research Congress in London. In 1941, he represented the United States at the Pan American Congress on Endocrinology at Montevideo. In that same year, he delivered the Julius Stieglitz Memorial Lecture before the American Chemical Society's Chicago Section. In 1942, he received the Squibb Award of the American Association for the Study of Internal Secretions. The Chicago Chapter of *The American Institute of Chemists* presented him its Honor Scroll Award in 1943.

He became a Fellow of *The American Institute of Chemists* in 1943.

George S. Monroe

George Stuart Monroe, for the past twenty-four years a research chemist with Universal Oil Products Company, Chicago, Illinois, died February 25th at his home, 6526 Fairfield Avenue, Berwyn, Illinois, at the age of fifty-five.

He was graduated from the University of Illinois in 1917. His first position was with the Newport Company, where he remained until 1924, when he joined Universal Oil Products Company. Since 1930, he had worked in close collaboration with Professor V. N. Ipatieff, F.A.I.C.,

with whom he published numerous scientific papers dealing principally with reactions at high pressures and temperatures, such as the synthesis of methanol from carbon dioxide and hydrogen, and the solubilities of gases under high pressures. Many patents dealing with the treatment of hydrocarbons have been issued to him.

He had a rare gift for making friends, and he was highly esteemed by everyone who has known him as a chemist and as a man. He had been a member of Sigma Xi, Phi Lambda Upsilon, and the American Chemical Society. He is survived by his wife, Edith Jensen Monroe.

John Hayes Vail

John Hayes Vail, head chemist of Anaconda Wire and Cable Company, Muskegon, Michigan, died October 4, 1947, at the age of thirty.

He was born in New York, N. Y. He received the B. S. degree from Fordham University in 1940.

From 1940 to 1943 he served as head ferrous chemist for Continental Motors Corporation, Muskegon, Michigan, and until 1944 as analytical chemist for the Dow Company, Midland, Michigan. From 1944 until his death he was chemical engineer and head chemist for Anaconda Wire and Cable Company.

He was the author of several papers on metallurgical subjects in *The Chemist-Analyst*. He was also informed in biochemistry and during

summer vacations in college he worked as research and clinical technician for Fordham University and Bellevue Psychiatric Hospital.

He is survived by his wife, Betty, and by two children aged six years and one year.

He was a member of the American Association for the Advancement of Science, the American Chemical Society, and the Fordham University Chemists' Alumni Club.

He became a Member of *The American Institute of Chemists* in 1945.

Glyco Reports Tests

H. Bennett, F.A.I.C., president, Glyco Products, Inc., 26 Court Street, Brooklyn 2, N. Y., announces that pilot plant and production scale tests with a new synthetic wax, Acrawax C, as a lubricant for dry drawing high carbon steels, have proved efficient and economical. Samples and data are available from the company.

Hobson to Stanford Research Institute

Dr. Jesse E. Hobson has resigned, effective March 15th, as director of Armour Research Foundation of the Illinois Institute of Technology, to become director of Stanford Research Institute, Palo Alto, California.



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JAMES R. WITHROW, *At-Large*

February Meeting

The 244th meeting of the National Council was held February 10, 1948, at The Chemists' Club, New York, N. Y. President Foster Dee Snell presided. The following officers and councilors were present: Messrs. H. L. Fisher, L. H. Flett, F. A. Hessel, D. Keyes, R. E. Kirk, J. J. Mattiello,

J. M. McIlvain, E. H. Northey, D. Price, F. D. Snell, L. Van Doren, L. T. Work, and J. J. Miskel. C. P. Neidig and V. F. Kimball were present.

The minutes of the previous meeting were accepted. The treasurer's report was accepted.

The date for the March meeting

of the National Council was set for March 23, 1948.

The Secretary reported that membership in the Institute now totals an all-time high of 2152, and that 229 new members have been elected since May 1, 1947.

The Secretary announced that John H. Vail, M.A.I.C., died October 14th.

A suggestion from Mr. Vernon C. Allison concerning national defense was presented.

The President reported that he had received a letter from the Director of the Budget of the City of New York, to the effect that the recommendations made by the A.I.C. concerning salaries of the Municipal chemists would be analyzed by him.

The Secretary reported that he had received a telephone call from Mr. Benjamin Janer, chairman of the Association of Municipal Chemists announcing that a hearing would be held February 17th to which the A.I.C. should send a delegate. Dr. Snell was asked to represent the Institute, and he suggested that two additional delegates be appointed.

A letter from Mr. Robert B. Deemer was presented, concerning his election as a Fellow for life.

The Secretary reported that he had accepted an invitation to visit the atomic energy exhibit of the Brookhaven National Laboratory, being held at the American Museum of Natural History, New York, and he

warmly recommended this exhibit as well-worth seeing.

The Secretary reported that he had attended a meeting of the Bar Association of the City of New York concerning a proposed bill which would permit professional persons to deduct from current income taxes a certain amount to be set aside in Government bonds as old age pensions. The Secretary was asked to represent the A.I.C. at the February 18th meeting and future meetings on this subject.

Dr. Snell reported that he had spoken recently at a joint meeting of The American Institute of Chemists and the American Chemical Society in Buffalo.

Dr. Joseph Mattiello reported, as chairman of the Committee on Annual Meeting Arrangements, that the New York Section of the American Chemical Society and the national A.I.C. could meet jointly on May 7th, at the Waldorf-Astoria Hotel, for the presentation of the 1948 Gold Medal of the Institute to Dr. Charles A. Thomas.

Upon motion, the chairman of the Committee on Annual Meeting Arrangements was given authority to change the date of the Annual Meeting from May 8th to Friday May 7th, and to select such quarters as may be suitable in order to meet jointly with the New York Section, A.C.S.

Dr. Lincoln T. Work, chairman of the Committee on Mementos, presented several suggestions.

The following new members were elected:

Fellows

Belfer, Samuel

Director, The Belfer Laboratories, Jefferson Building, Peoria 2, Illinois.

Gettler, Joseph Daniel

Instructor in Chemistry, New York University, Nichols Building, University Heights, New York 53, New York.

Gutberlet, E. L.

Owner and Director, Gutberlet Laboratories, 205 Alaskan Way South, Seattle, Washington.

Hallman, Lois Field

Chemist, U. S. Dept. of Agriculture, Bureau of Human Nutrition and Home Economics, Beltsville, Maryland.

Heiberger, Charles Adam

Research Director, Ohio--Apex, Inc., Nitro, West Virginia.

Owens, Francis P.

Secretary-Treasurer, Laucks Laboratories, Inc., 1008 Western Avenue, Seattle 4, Washington.

Peters, Franklin T.

Technical Representative, Glyco Products Company, Inc., 26 Court Street, Brooklyn, New York.

Schneller, George H.

Director of Pharmaceutical Application, Calco Chemical Division, Bound Brook, New Jersey.

Stephens, Chester H.

Teacher, Los Angeles City College, 855 North Vermont Avenue, Los Angeles, California.

Wolf, Joseph A.

Director, Central Laboratories, 312 David Whitney Building, Detroit 26, Michigan.

Members

Chartrand, Victor Edward

Executive Paint Chemist, Unifilm Paint Company, 100 Cornell Boulevard, Somerville, New Jersey.

Ellis, James E.

Director of Laboratory, St. Joseph's Hospital, West Jackson Street, Bloomington, Illinois.

Mason, James Madison

Patent Attorney, Hauff & Warland, 41 Park Row, New York City, N. Y.

Zyzyck, Leonard M.

Chemist, Stein Davies Company, 12-10 Jackson Avenue, Long Island City, New York.

Associate

Starnes, Willard Ray

Research Chemist, Dept. of Pharmacology, Medical College of Alabama, Birmingham 5, Alabama.

Raised from Associate to Member

Darbey, Albert

Textile and Analytical Chemist, Alrose Chemical Company, Providence, R. I.

Madsen, Niels

Chemical Engineer, Foster Wheeler Corp., Research Laboratory, Carteret, New Jersey.

There being no further business, adjournment was taken.

Chapters

Chicago

Chairman, Edward L. Gordy

Vice Chairman, J. Bowman

Secretary-Treasurer

Mary L. Alexander,
Universal Oil Products Co.,
310 South Michigan Street,
Chicago 4, Illinois

Council Representative,
Martin de Simo

Reporter to The Chemist,
Madge M. Spiegler

In spite of wet, snowy weather and the fact that it was Friday, the 13th, the latest Chicago Chapter meeting was well-attended. The meeting was preceded by an informal social mixer which provided everyone with an opportunity to meet the speakers of the evening. Following a short tribute in memory of the late Dr. Fred C. Koch, read by our secretary, Miss Alexander, Mr. Gordy introduced the speakers and the topic: "The Professional Training for Chemical Management". Discussion on this topic was led by: George Gelman, Quartermaster Food and Container Insti-

tute for the Armed Forces; H. E. Robinson, Swift and Company, and George S. Speer, Institute for Psychological Services, Illinois Institute of Technology. After general discussion and questions from the floor, the meeting was adjourned.

Miss Mary Alexander, F.A.I.C., and Dr. Louis Koenig, F.A.I.C. have been appointed associate editors of *The Chemical Bulletin*, publication of the Chicago Section of the American Chemical Society.

Kaitz to American Organic Chemical

Stanford L. Hermann, F.A.I.C., president, American Organic Chemical Corporation, 1300 Allen Street, Linden, N. J., announces that Dr. Charles Kaitz has joined the staff. Dr. Kaitz was trained as chemical engineer at Brooklyn Polytechnic Institute, Carnegie Institute of Technology, and the University of Chicago. His industrial experience includes work with the Chemical Syntheses Company, the American Diet-aids of Yonkers, N. Y., and the Calco Chemical Division of American Cyanamid Company.

Dr. Gustav Egloff, F.A.I.C., took part, March 7th, in Northwestern University's Reviewing Stand broadcast over WGN. The panel discussion was "What is the Government's Role in Scientific Research?"

Increased Production Stressed

Horace D. Acaster, F.A.I.C., manager of industrial relations at Calco Chemical Division of American Cyanamid Company, Bound Brook, N. J., in commenting on a new agreement signed by the company and Local No. 111, A. F. of L., stated, "There has been little to distinguish the friendly and cooperative attitude which existed in these negotiations from that of a year ago. If there was any difference, it was in a more complete recognition by both the company and the union of each other's problems and viewpoints, and a more ready acceptance of the fact that only on such mutual recognition can sound and lasting company-union relationships be retained for the continuing benefit of employees and company alike. The keynote thought throughout was the need for increased productive efficiencies through joint effort."

Dr. George D. Palmer, F.A.I.C., professor of organic chemistry at the University of Alabama, spoke February ninth before a luncheon meeting of the Engineers Club in Chattanooga, Tennessee. His subject was "Opening the Door to Opportunity for Southern Engineers."

The life of Professor Michael Pupin was dramatized as a radio play on the Du Pont "Cavalcade of America" broadcast over NBC, February 23rd.

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For Your Library

The Scientists Speak

Edited by Warren Weaver. (Contributors are eighty-one leading scientists.) *Boni & Gaer.* 1947. 369 pp. 6" x 8½". \$3.75.

Originally the material in this book was broadcast during the intermissions of the Sunday afternoon concerts of the New York Philharmonic-Symphony Orchestra. Scientists were selected who were authorities in their fields (eight are Nobel Prize winners) and what they prepared was then edited into simple language designed to be easily understood. With minor changes these essays were then published in this book, the whole tied together by introduction and prefaces by Dr. Warren Weaver, director of Natural Sciences, Rockefeller Foundation.

The summaries are grouped into chapters headed: Science and Complexity, The Science of the Earth, The Science of the Sky, The Science of New Materials and Improved Processes, New Instrumental Techniques—New Chemicals, Atoms and Molecules, Physics and Mathematics, Chemistry and Living Things, Plants and Animals, Fundamental Biology, The Science of Ourselves, Science and Health, The Natural and the Social Sciences, Science and the War, and The Long-Term Values. An excellent bibliography accompanies each chapter.

A recent criticism of this volume stated that there was too much emphasis on the biological sciences. This emphasis is desirable. In a popular series of lectures, it must be kept in mind that man's greatest interest is in man himself. He wants to know what science is doing for him. Moreover, scientists have much more to learn before they can guarantee man a long, disease-free life. Any emphasis placed on the scientists' part in helping mankind will encourage scientists in this noble work, and will give the public a greater appreciation of science.

It is to the credit of scientific progress that already there are significant developments in certain fields beyond those mentioned, though this book was published as late as October, 1947.

Scientists should read this book. They will find information about fields, other than their own, which will be mentally broadening. It is also an excellent object-lesson in how to write about complex subjects so that the layman can comprehend them.

The National Academy of Sciences has distributed 8000 copies of *The Scientists Speak* to teachers. All book royalties are to go to the National Science Fund of the National Academy of Sciences.

—V. F. K.

FOR YOUR LIBRARY

An Introduction to Organic Chemistry

By *Ira D. Garard*. (3rd Edition 1948). *John Wiley and Sons, Inc.*, 396 pp. \$3.50.

Writing especially for students who plan to take only a semester of organic chemistry, the author has presented the subject by stressing some of the more fundamental reactions and completely omitting some others, such as the Grignard reaction. It is debatable whether or not such presentation is to be preferred.

In all cases the author has done a good job in outlining clearly and succinctly a background of organic chemistry. The problems at the end of each chapter and additional references are well and carefully selected.

The book can be satisfactorily used for a short introductory course in organic chemistry.

—*Dr. Frederick A. Hessel, F.A.I.C.*

Industrial Oil and Fat Products

By *Alton E. Bailey*. *Interscience Publishers, Inc.*, x-735 pp. 6½" 9 ½". \$11.00.

Here is an up-to-date reference work and test book on the important oils and fats of industry, containing data useful to both the chemist and the chemical engineer.

The book is divided into four main sections, as follows:

A—giving the structure and composition, reactions and physical proper-

ties of fats and fatty acids; B—setting forth the sources, consumption, uses and characteristics of the most important natural fats; C—embodying detailed description of manufacturing methods involved in their industrial application; D—outlining the unit processes of fat technology and their coordination in industry.

In assembling descriptive data on modern methods in this industry, the author has done an excellent job. In view of the international importance of these substances and the rapid advances made recently in their technology, this book should prove invaluable to the chemical engineer and student.

—*John W. Adams, Jr.*

Books Announced

"The International Who's Who", 12th Edition. 1948. (15,000 biographies) \$16.00. May be ordered from Europa Publications, Ltd., 39 Bedford Square, London, W.C. 1, England.

"Chemical Architecture". Vol. 5 of *Frontiers in Chemistry Series*. Edited by R. E. Burk and Oliver Grummitt. 216 pp. \$4.50. *Interscience Publishers, Inc.*, 215 Fourth Avenue, New York 3, N. Y.

"Mechanical Behavior of High Polymers", by Turner Alfrey, Jr. 1948. 650 pp. 6" x 9". \$9.50. *Interscience Publishers, Inc.*, 215 Fourth Avenue, New York 3, N. Y.

"Dissociation Energies and Spectra of Diatomic Molecules", by A. G. Gaydon. American edition. \$5.00. John Wiley and Sons, Inc., 440 Fourth Avenue, New York 16, N. Y.

"Fundamentals of Immunology", by William C. Boyd. 2nd Edition. 1947. 503 pp. 6" x 9". \$6.00. Interscience Publishers, Inc., 215 Fourth Avenue, New York 3, N. Y.

"The Essential Oils", Vol. I. By Dr. Ernest Guenther, technical director, Fritzsche Brothers, Inc., and collaborators. 448 pp. \$6.00. D. Van Nostrand Company, Inc., New York, N. Y.

"New Developments in Ferromagnetic Materials", a monograph on the Progress of Research in Holland series. By J. L. Snoek. 136 pp. 6" x 8". \$2.50. Published by Elsevier Publishing Company, Inc. 215 Fourth Avenue, New York 3, N. Y.

"Corrosion Handbook", edited by Herbert H. Uhlig, associate professor of metallurgy, Massachusetts Institute of Technology. 1221 pp. \$12.00. John Wiley & Sons, New York, N. Y.

"Emotional Maturity", by Leon J. Saul, M.D., professor of clinical psychiatry, Temple University. 300 pp. \$5.00. J. B. Lippincott Company, Philadelphia 5, Penna.

"Symposium on Paint and Paint Materials". Arranged by a symposium committee headed by C. H. Rose, F.A.I.C., National Lead Company, and sponsored by the American Society for Testing Material's Committee D-1 on Paint, Varnish, Lacquer and Related Products. Covers ten technical papers and discussion by John C. Moore, on Test Methods. Paper bound. 120 pp. 6" x 9". \$2.00. Cloth bound \$2.65. Order from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa.

Booklets

"S & S Descriptive Catalog No. 67". Lists grades and prices of analytical filter papers. Request it from Carl Schleicher and Schuell Company, Inc., 116 West 14th Street, New York 11, N. Y.

"Still Unfinished — Our Educational Obligation to America's Children". Illustrated booklet available from the National Education Association of the United States, 1201 Sixteenth Street, N.W., Washington 6, D. C.

"Catalog, Feb. and Mar. 1948, of Translations of I. G. Farben patents and manufacturing data pertaining to dyes and dyeing." Available upon request to Research Information Service, 509 Fifth Avenue, New York 17, N. Y.

BOOKLETS

"Unesco Bulletin for Libraries". Includes list of war-devastated libraries seeking replacement volumes on science and other subjects. Communications should be addressed to the International Clearing House for Publications, Unesco House, 19, Avenue Kleber, Paris 16^e, France, marked "Bulletin".

"Safety for the Household", National Bureau of Standards Circular C-463. 200 pp. Discusses hazards around the home, and includes suggestions for building according to safety factors. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at seventy-five cents a copy.

"This is Witco—at Work with Industry." Descriptive, illustrated booklet, giving over-all picture of Witco Chemical Company. Request it from the company at 295 Madison Avenue, New York 17, N. Y.

"Partners in Research", Annual Report 1947 of Armour Research Foundation of Illinois Institute of Technology. Describes the research in which the Foundation was engaged during 1947.

"Recent American, British, and German Books on Chemistry". Leaflet available on request from Mapleton House, 5415 17th Avenue, Brooklyn 4, New York.

"Sulfate Determination with Tetrahydroxyquinone", circular describing procedure. Available on request from the Meyer Scientific Supply Company, Inc., 221 Atlantic Avenue, Brooklyn 2, New York.

"Boston-Bradley Adjustable Blade for Laying Down Films of any Desired Thickness". Leaflet available from Henry A. Gardner Laboratory, Inc., 4723 Elm Street, Bethesda 14, Maryland.

"What the Neutron Is". Booklet by Dr. Albert Cushing Crehore. Available from V. E. Berner, 1199 Lander Road, Cleveland, Ohio.

"Determination of the Solubility of Dyes", Calco Technical Bulletin No. 801. Available from Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

Book Exhibit

The Division of Chemical Education of The American Chemical Society is holding a book exhibit in conjunction with the Society's spring meeting in Chicago, the week of April 19th. More than forty leading publishers will be represented, and over six hundred volumes on chemistry will be on display. The exhibit will be in the Exhibition Hall of the Hotel Stevens. The April issue of the *Journal of Chemical Education* will contain a classified list of the titles on display.



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Suggested for Professional Reading

Dr. Gustav Egloff recommends:

"Industrial Research—Its Importance to National Welfare", by H. A. Winne, vice president, General Electric Company. Talk before the Navy Industrial Association, Washington, D. C., November 18, 1947: "... I am confident that the Navy recognizes the commensurate values of industrial and university research, and will continue to support and stimulate both to the benefit of our National welfare."

"Government Research in Educational Institutions: Its Benefits and Hazards." By Dr. James R. Killian, Jr., vice president, Massachusetts Institute of Technology. Presented before the Navy Industrial Association, Washington, D. C., November 18, 1947: "... The consideration, acceptance, and priority of any sponsored research project (accepted by universities) should be governed by the extent to which the proposed activity will carry forward the education objectives of the institution..."

"What's Ahead for Patents, Industrial Research and Atomic Energy?" Addresses given at the symposium of the 52nd Congress of American Industry, New York, N. Y., Dec. 5, 1947. National Association of Manufacturers, 14 West 49th Street, New York 20, N. Y.

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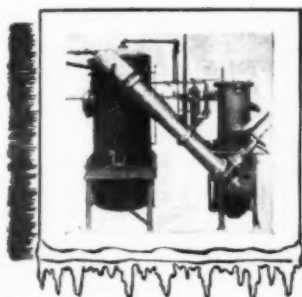
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